

**THE OCCURRENCE OF *ORTHOPODOMYIA ALBA*  
BAKER IN GEORGIA (DIPTERA: CULICIDAE).**

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The only previous published record of the rare tree-hole mosquito, *Orthopodomyia alba* Baker, from Georgia is that of Carpenter, et al. (1946), who base their record on an adult female and one other adult, sex unknown, from Liberty Field (Sub-base), Camp Stewart, Hinesville, Ga., on June 27, 1944. The female was taken in a light trap and the other adult from a resting station. Since Jenkins and Carpenter (1946), Ross (1947), and others have indicated that adults of *Orthopodomyia signifera* (Coq.) cannot be separated from *O. alba* with any reliability, this record must be regarded as questionable. Schoof and Ashton (1944) apparently misquoted the Shields and Miles (1937) paper when they stated that "*alba* has been recorded from one southern state, Georgia." The actual collection was made in Colbert County, Ala., instead of in Georgia.

Jenkins and Carpenter suggested that "It is possible that *O. alba* is a genetic variant, or that it is a well-marked and distinct extreme of the natural variation of *O. signifera*." Dodge (1946) noted that the first instars of these two species are distinct, and Wilkins and Breland (1951) have shown that there were sufficient characters to separate them in all other larval instars. Wilkins and Breland concluded from their studies that specific status should be maintained for *O. alba*. Darsie (1951) stated that "the pupal chaetotaxy offers many good characters to support their specific rank."

Bohart (1950) lists the most reliable characters for separating the three United States species of *Orthopodomyia*: *alba*, *signifera*, and *californica* Bohart.

In 7 years (1946 to 1953) of collecting in Atlanta, Ga. and vicinity by members of the Medical Entomology Unit of the Communicable Disease Center, only one larva of *O. alba* has been found up to the present time. This larva was collected by C. Phillips, S. Darby, and C. Bird on November 6, 1947 from an elm tree. On March 25, 1953, the authors found another elm tree about four blocks from the State capitol buildings in downtown Atlanta from which over 1,100 *O. alba* were taken. Only seven *O. signifera* were found. The tree hole was quite large and open and contained approximately 1½ gallons of deeply stained brownish-yellow water. The pH of this water was 8.6. Another elm tree hole containing

about 2 quarts of water was located about 20 feet from the first; however, surprisingly enough, it contained no larvae of any kind. The pH of this water was 8.49, and the color was a much lighter brown.

Of the seven *O. signifera* taken, six larvae had dorsal plates on segment VIII only, and only one larva had plates on segments VII and VIII. However, they exhibited the characteristic pinkish body color and dark head capsule while the *O. alba* all exhibited the characteristic whitish body color and the light head capsule.

Since the number of larvae taken was unusually high for the species, sufficient material is being prepared for a further investigation into the variations of characters of this species.

In two feeding experiments on a baby chick, the adult females showed extreme reluctance to take a blood meal. They did not approach the chick readily, and when they did, they were easily disturbed. On the third and fourth attempts, the chick was allowed to remain adjacent to the cage over night, and fastened in such a manner as to reduce movement to a minimum. In each case, several females were observed to have had a blood meal. Several females were crushed on a glass slide and stained. Examination of the crushed mosquito revealed nucleated avian blood cells. The remaining females died before any oviposition occurred.

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#### LITERATURE CITED

- Bohart, R. M. 1950. A new species of *Orthopodomyia* from California (Diptera, Culicidae). *Ann. Ent. Soc. Am.* 43 (3): 399-404.
- Carpenter, S. J., W. W. Middlekauf, and R. W. Chamberlain. 1946. The mosquitoes of the southern United States east of Oklahoma and Texas. *Am. Mid. Nat. Mon.* 3: 1-292, Notre Dame.
- Darsie, R. F., Jr. 1951. Pupae of the Culicine mosquitoes of northeastern United States (Diptera, Culicidae, Culicini). *Cornell U. Agr. Exp. Sta. Mem.* 304: 1-67.
- Dodge, H. R. 1946. Studies upon mosquito larvae. Abstracts of Doctoral Dissertations, No. 50: 17-22, The Ohio State University Press.

- Jenkins, D. W. and S. J. Carpenter. 1946. Ecology of the tree hole breeding mosquitoes of Nearctic North America. *Ecol. Mon.* 16: 31-48.
- Ross, H. H. 1947. The mosquitoes of Illinois (Diptera: Culicidae). *Bull. Ill. Nat. Hist. Sur.* 24 (1): 1-96.
- Schoof, H. F. and D. F. Ashton. 1944. Notes and new distribution records on the mosquitoes of North Carolina. *J. Elisha Mitchell Scientific Soc.* 60: 1-10.
- Shields, S. E. and V. I. Miles. 1937. The occurrence of *Orthopodomyia alba* in Alabama (Diptera, Culicidae). *Proc. Ent. Soc. Wash.* 39 (8): 237.
- Wilkins, O. P. and O. P. Breland. 1951. The larval stages and the biology of the mosquito, *Orthopodomyia alba* Baker (Diptera: Culicidae). *J. New York Ent. Soc.* 59: 225-240.

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**POGONOMYRMEX SALINUS OLSEN, A SYNONYM  
OF POGONOMYRMEX OCCIDENTALIS (CRESS.)  
(HYMENOPTERA: FORMICIDAE).**

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Recently in determining a series of *Pogonomyrmex* workers collected by Lee M. Burge from five colonies in Elko County, Nevada, I found that in the keys of Creighton, 1950 (Harvard Univ., *Bull. Mus. Compar. Zool.* 104: 565 pp., 57 pls.) and Olson, 1934 (Harvard Univ., *Bull. Mus. Compar. Zool.* 77: 493-514, 15 pls.) specimens exhibiting the most extreme variation could be referred to *salinus* Olsen and specimens with the least variation to *occidentalis* (Cress.)! Upon checking these individuals with the original description of *salinus* I found the variations to be of such a nature that they could well be within the range of a single species. Since Olsen had described *salinus* from a holotype worker, which is now in the Museum of Comparative Zoology, Cambridge, Massachusetts, I sent series of workers from all five of the Elko County nests to Dr. W. L. Brown for comparison with the type of *salinus*. After carefully studying the specimens Dr. Brown wrote me as follows, "Olsen's *P. salinus* agrees well with certain specimens among your series—i.e., those having an almost entirely non-transverse-rugose postpetiole and slender, upwardly-directed propodeal teeth of "medium" length. The basigastric shagreening in Olsen's type is not so strong or opaque as in several of your Nevada specimens. I would conclude that on the basis of